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YANCHUS III, PAUL B	

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/886,859
Filing Date: June 21, 2001
Appellant(s): TRAN ET AL.

Majid S. AlBassam
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 7/31/07 appealing from the Office action mailed 1/29/07.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,442,142	BAR-NIV	8-2002
6,678,728	UPPUNDA	1-2004

"Microsoft Computer Dictionary Fifth Edition" Microsoft Press, 2002, p. 527

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 11-17 and 23-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Bar-Niv, US Patent no. 6,442,142.

Regarding claims 1 and 13, Bar-Niv teaches a method and apparatus for regulating transceiver power consumption in a communications network comprising:

monitoring data [incoming pulses] received by the transceiver to detect the presence or absence of a received data signal [column 1, lines 57-67]; and

controlling a transceiver state machine [energy-on state machine] to regulate transceiver power consumption in response to the presence or absence of the data received [column 2, lines 32-49].

wherein the transceiver state machine includes a wake-up control and a power down control [energy-on state machine and power module together act as a wake-up control and a power down control], the wake-up control being configured to send power control signals

[power module supplies power to transceiver circuitry] to a transmitter and the power down control being configured to send power control signals [power module supplies no power to transceiver circuitry] to all components of the transceiver [when a data signal is being received, the ENERGYON signal is at a first level and the power module supplies power to transceiver circuitry and when no data signal is being received, the ENERGYON signal is at a second level and the power module stops supplying power to the transceiver circuitry, column 2, lines 32-50 and column 6, lines 27-31].

Regarding claims 2 and 14, Bar-Niv teaches monitoring data received during a time period of normal operating power consumption [106 in Figure 4 and column 6, lines 11-15 and 29-32, power is supplied to transceiver circuitry when ENERGYON is at level 1] and upon detecting the absence of a received signal for the first predetermined time [256 ms], controlling the transceiver state machine to regulate transceiver power consumption to be at minimized operating power [104 in Figure 4 and column 6, lines 16-20 and 29-32, transceiver circuitry is powered down when ENERGYON is at level 0].

Regarding claims 3 and 15, Bar-Niv teaches monitoring data received during a time period of normal operating power consumption [106 in Figure 4 and column 6, lines 11-15 and 29-32, power is supplied to transceiver circuitry when ENERGYON is at level 1], and upon detecting the presence of a received signal [LINK_ON] for the first predetermined time, controlling the transceiver state machine to regulate transceiver power consumption to be at normal operating power [100 in Figure 4 and column 6, lines 11-19 and 29-32, power is supplied to transceiver circuitry when ENERGYON is at level 1].

Regarding claims 4 and 16, Bar-Niv teaches monitoring data received includes comparing a received data signal [differential voltage, column 4, lines 25-46] from the communications network with a reference signal [300 mV, column 4, lines 25-46] and controlling the transceiver state machine when a magnitude of the received data signal exceeds the reference signal [column 2, lines 50-67].

Regarding claims 5 and 17, Bar-Niv teaches monitoring data received during a time period of minimized operating power consumption [104 in Figure 4 and column 6, lines 16-20 and 29-32, transceiver circuitry is powered down when ENERGYON is at level 0], and upon detecting the absence of a received signal for the first predetermined time, controlling the transceiver state machine to regulate transceiver power consumption to be at minimized operating power [104 in Figure 4 and column 6, lines 21-32, transceiver circuitry is powered down when ENERGYON is at level 0].

Regarding claims 11 and 23, Bar-Niv teaches monitoring data received during a time period of minimized power consumption [104 in Figure 4 and column 6, lines 16-20 and 29-32, transceiver circuitry is powered down when ENERGYON is at level 0], and upon detecting the presence of a received signal for a predetermined standby time, controlling the transceiver state machine to regulate transceiver power consumption to be at normal operating power [100 in Figure 4 and column 6, lines 21-32, power is supplied to transceiver circuitry when ENERGYON is at level 1].

Regarding claims 12 and 24, Bar-Niv teaches monitoring data received during a time period of minimized power consumption [104 in Figure 4 and column 6, lines 16-20 and 29-32, transceiver circuitry is powered down when ENERGYON is at level 0], and upon detecting the

presence of a received signal for a second predetermined time subsequent to the predetermined standby time, controlling the transceiver state machine to regulate transceiver power consumption to be at minimized operating power [100 in Figure 4 and column 6, lines 21-32, power is supplied to transceiver circuitry when ENERGYON is at level 1].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6-10 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bar-Niv, US Patent no. 6,442,142. in view of, Uppunda et al., US Patent no. 6,678,728.

Regarding claims 6 and 18, Bar-Niv, as described above, teaches a method and apparatus for regulating transceiver power consumption in a communications network. Bar-Niv does not teach controlling the transceiver to transmit link determination signals to devices on the communications network when the transceiver is in a power-down mode. Uppunda et al. teaches transmitting link signals [keep-alive packets, column 1, lines 25-29 and column 3, lines 40-42] to other devices on the network while in a powered down state [sleep state, column 1, lines 20-29 and column 3, lines 40-42].

It would have been obvious to one of ordinary skill in the art to combine the teachings of Bar-Niv and Uppunda et al. Periodically transferring link signals from a first device that is in a

sleep state to other devices on the network indicates to the other devices on the network that the first device is still connected to the network, even though it is idle [Uppunda et al., column 1, lines 20-29].

Regarding claims 7 and 19, Uppunda et al., as described above, teaches periodically transferring link signals to other devices on the network while in a sleep state. Uppunda et al. further teaches exiting the sleep state only when wake up packets are received from other devices on the network [column 3, lines 48-56]. Therefore, Uppunda et al. teaches transmitting link signals to other devices on the network while in a sleep mode and then remaining in sleep mode if no wake packets have been received from the network.

Regarding claims 8 and 20, Uppunda et al., as described above, teaches that, when in sleep mode, a first device periodically sends link signals to other devices on the network to indicate that it is still connected to the network. Uppunda et al. further teaches that before transferring data to the first device from a second device on the network, the second device must check that the first device is connected to the network [column 1, lines 12-25]. The second device only sends data to the first device when it is determined that the first device is connected to the network. Since the link signals are used to indicate to the network that the first device is connected to the network, the second device would send data to the first device in response to the link signals.

Regarding claims 9 and 21, Uppunda et al., as described above, teaches periodically transferring link signals to other devices on the network while in a sleep state. Uppunda et al. further teaches exiting the sleep state when wake up packets are received from other devices on the network [column 3, lines 48-56]. Therefore, Uppunda et al. teaches transmitting link signals

to other devices on the network while in a sleep mode and then exiting the sleep mode when wake packets have been received from the network.

Regarding claims 10 and 22, Uppunda et al., as described above, teaches that, when in sleep mode, a first device periodically sends link signals to other devices on the network to indicate that it is still connected to the network. Uppunda et al. further teaches that before transferring data to the first device from a second device on the network, the second device must check that the first device is connected to the network [column 1, lines 12-25]. The second device only sends data to the first device when it is determined that the first device is connected to the network. Since the link signals are used to indicate to the network that the first device is connected to the network, the second device would send data to the first device in response to the link signals.

(10) Response to Argument

1. Applicant argues in substance, with regard to claim 1, that Bar-Niv does not disclose all of the claimed limitations. Specifically, Applicant argues that Bar-Niv does not disclose the limitation, "wherein the transceiver state machine includes a wake-up control and a power down control, the wake-up control being configured to send power control signals to a transmitter and the power down control being configured to send power control signals to all components of the transceiver." Examiner disagrees.

Bar-Niv discloses an energy-on state machine and power module which together act as both a wake-up control and a power down control for the transceiver. Specifically, the energy-on state machine instructs the power module to either supply power to the transceiver circuitry or to not supply power to the transceiver circuitry. The energy-on state machine and the power module

together act as both a wake up control and a power down control for the transceiver circuitry. The transceiver circuitry would inherently include some type of transmitter. The examiner interprets the power supplied from the power module to the transceiver circuitry to be a power control signal [column 2, lines 32-50 and column 6, lines 21-31]. Therefore, Bar-Niv does disclose a wake-up control and a power down control, the wake-up control being configured tosend power control signals to a transmitter and the power down control being configured to send power control signals to all components of the transceiver.

Applicant also seems to argue that the claims require that the wake-up control and the power down control be two separate "elements" and, consequently, the Bar-Niv energy-on state machine and power module cannot satisfy that limitation because the energy-on state machine and power module combine the functions of both the wake-up control and the power down control. Examiner disagrees.

The claims do not recite the limitation of the wake-up control and power-down control being separate "elements." The claims merely recite "a wake-up control and a power down control." Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Finally, Applicant argues that Bar-Niv does not inherently disclose that the transceiver circuitry includes a transmitter. Examiner disagrees.

Examiner submits the Microsoft Computer Dictionary Fifth Edition, page 527 [Microsoft Dictionary]. Microsoft Dictionary defines the term transceiver as "Short for **trans**mitter/re**ceiver**. A device that can both transmit and receive signals." Therefore, by

definition, the transceiver circuitry must include some type of transmitter to perform the required transmitting of signals.

In summary, Bar-Niv does disclose all of the limitations as claimed in claim 1.

2. Applicant argues in substance that claim 2 is patentable because it is dependent upon claim 1 and Bar-Niv does not disclose all of the limitations of claim 1. Examiner disagrees.

Please see the above arguments in regard to claim 1.

3. Applicant argues in substance that claim 3 is patentable because it is dependent upon claim 1 and Bar-Niv does not disclose all of the limitations of claim 1. Examiner disagrees.

Please see the above arguments in regard to claim 1.

4. Applicant argues in substance that claim 4 is patentable because it is dependent upon claim 1 and Bar-Niv does not disclose all of the limitations of claim 1. Examiner disagrees.

Please see the above arguments in regard to claim 1.

5. Applicant argues in substance that claim 5 is patentable because it is dependent upon claim 1 and Bar-Niv does not disclose all of the limitations of claim 1. Examiner disagrees.

Please see the above arguments in regard to claim 1.

6. Applicant argues in substance that claim 11 is patentable because it is dependent upon claim 1 and Bar-Niv does not disclose all of the limitations of claim 1. Examiner disagrees.

Please see the above arguments in regard to claim 1.

7. Applicant argues in substance that claim 12 is patentable because it is dependent upon claim 1 and Bar-Niv does not disclose all of the limitations of claim 1. Examiner disagrees.

Please see the above arguments in regard to claim 1.

8. Applicant argues in substance, with regard to claim 13, that Bar-Niv does not disclose all of the claimed limitations. Specifically, Applicant argues that Bar-Niv does not disclose the limitation, "wherein the transceiver state machine includes a wake-up control and a power down control, the wake-up control being configured to send power control signals to a transmitter and the power down control being configured to send power control signals to all components of the transceiver." Examiner disagrees.

Bar-Niv discloses an energy-on state machine and power module which together act as both a wake-up control and a power down control for the transceiver. Specifically, the energy-on state machine instructs the power module to either supply power to the transceiver circuitry or to not supply power to the transceiver circuitry. The energy-on state machine and the power module together act as both a wake up control and a power down control for the transceiver circuitry. The transceiver circuitry would inherently include some type of transmitter. The examiner interprets the power supplied from the power module to the transceiver circuitry to be a power control signal [column 2, lines 32-50 and column 6, lines 21-31]. Therefore, Bar-Niv does disclose a wake-up control and a power down control, the wake-up control being configured tosend power control signals to a transmitter and the power down control being configured to send power control signals to all components of the transceiver.

Applicant also seems to argue that the claims require that the wake-up control and the power down control be two separate "elements" and, consequently, the Bar-Niv energy-on state machine and power module cannot satisfy that limitation because the energy-on state machine and power module combine the functions of both the wake-up control and the power down control. Examiner disagrees.

The claims do not recite the limitation of the wake-up control and power-down control being separate "elements." The claims merely recite "a wake-up control and a power down control." Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Finally, Applicant argues that Bar-Niv does not inherently disclose that the transceiver circuitry includes a transmitter. Examiner disagrees.

Examiner submits the Microsoft Computer Dictionary Fifth Edition, page 527 [Microsoft Dictionary]. Microsoft Dictionary defines the term transceiver as "Short for **trans**mitter/re**ceiver**. A device that can both transmit and receive signals." Therefore, by definition, the transceiver circuitry must include some type of transmitter to perform the required transmitting of signals.

In summary, Bar-Niv does disclose all of the limitations as claimed in claim 13.

9. Applicant argues in substance that claim 14 is patentable because it is dependent upon claim 13 and Bar-Niv does not disclose all of the limitations of claim 13. Examiner disagrees.

Please see the above arguments in regard to claim 13.

10. Applicant argues in substance that claim 15 is patentable because it is dependent upon claim 13 and Bar-Niv does not disclose all of the limitations of claim 13. Examiner disagrees.

Please see the above arguments in regard to claim 13.

11. Applicant argues in substance that claim 16 is patentable because it is dependent upon claim 13 and Bar-Niv does not disclose all of the limitations of claim 13. Examiner disagrees.

Please see the above arguments in regard to claim 13.

12. Applicant argues in substance that claim 17 is patentable because it is dependent upon claim 13 and Bar-Niv does not disclose all of the limitations of claim 13. Examiner disagrees.

Please see the above arguments in regard to claim 13.

13. Applicant argues in substance that claim 23 is patentable because it is dependent upon claim 13 and Bar-Niv does not disclose all of the limitations of claim 13. Examiner disagrees.

Please see the above arguments in regard to claim 13.

14. Applicant argues in substance that claim 24 is patentable because it is dependent upon claim 13 and Bar-Niv does not disclose all of the limitations of claim 13. Examiner disagrees.

Please see the above arguments in regard to claim 13.

15. Applicant argues in substance that claim 6 is patentable because it is dependent upon claim 1 and Bar-Niv and Uppunda do not disclose all of the limitations of claim 1. Examiner disagrees.

Uppunda is not relied upon to disclose the limitations of claim 1. Bar-Niv discloses all limitations of claim 1. Please see the above arguments in regard to claim 1.

16. Applicant argues in substance that claim 7 is patentable because it is dependent upon claim 1 and Bar-Niv and Uppunda do not disclose all of the limitations of claim 1. Examiner disagrees.

Uppunda is not relied upon to disclose the limitations of claim 1. Bar-Niv discloses all limitations of claim 1. Please see the above arguments in regard to claim 1.

17. Applicant argues in substance that claim 8 is patentable because it is dependent upon claim 1 and Bar-Niv and Uppunda do not disclose all of the limitations of claim 1. Examiner disagrees.

Uppunda is not relied upon to disclose the limitations of claim 1. Bar-Niv discloses all limitations of claim 1. Please see the above arguments in regard to claim 1.

18. Applicant argues in substance that claim 9 is patentable because it is dependent upon claim 1 and Bar-Niv and Uppunda do not disclose all of the limitations of claim 1. Examiner disagrees.

Uppunda is not relied upon to disclose the limitations of claim 1. Bar-Niv discloses all limitations of claim 1. Please see the above arguments in regard to claim 1.

19. Applicant argues in substance that claim 10 is patentable because it is dependent upon claim 1 and Bar-Niv and Uppunda do not disclose all of the limitations of claim 1. Examiner disagrees.

Uppunda is not relied upon to disclose the limitations of claim 1. Bar-Niv discloses all limitations of claim 1. Please see the above arguments in regard to claim 1.

20. Applicant argues in substance that claim 18 is patentable because it is dependent upon claim 13 and Bar-Niv and Uppunda do not disclose all of the limitations of claim 13. Examiner disagrees.

Uppunda is not relied upon to disclose the limitations of claim 13. Bar-Niv discloses all limitations of claim 13. Please see the above arguments in regard to claim 13.

21. Applicant argues in substance that claim 19 is patentable because it is dependent upon claim 13 and Bar-Niv and Uppunda do not disclose all of the limitations of claim 13. Examiner disagrees.

Uppunda is not relied upon to disclose the limitations of claim 13. Bar-Niv discloses all limitations of claim 13. Please see the above arguments in regard to claim 13.

22. Applicant argues in substance that claim 20 is patentable because it is dependent upon claim 13 and Bar-Niv and Uppunda do not disclose all of the limitations of claim 13. Examiner disagrees.

Uppunda is not relied upon to disclose the limitations of claim 13. Bar-Niv discloses all limitations of claim 13. Please see the above arguments in regard to claim 13.

23. Applicant argues in substance that claim 21 is patentable because it is dependent upon claim 13 and Bar-Niv and Uppunda do not disclose all of the limitations of claim 13. Examiner disagrees.

Uppunda is not relied upon to disclose the limitations of claim 13. Bar-Niv discloses all limitations of claim 13. Please see the above arguments in regard to claim 13.

24. Applicant argues in substance that claim 22 is patentable because it is dependent upon claim 13 and Bar-Niv and Uppunda do not disclose all of the limitations of claim 13. Examiner disagrees.

Uppunda is not relied upon to disclose the limitations of claim 13. Bar-Niv discloses all limitations of claim 13. Please see the above arguments in regard to claim 13.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Paul Yanchus

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SUPERVISORY PATENT EXAMINER
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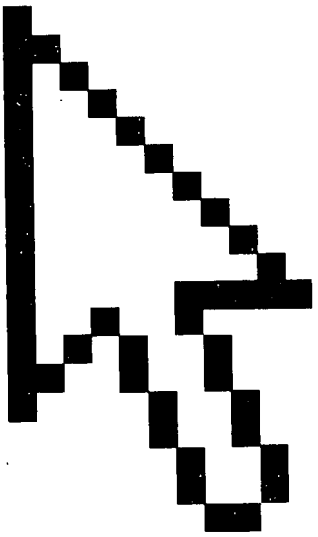
Microsoft

Microsoft Computer Dictionary

Fifth Edition



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transceiver *n.* Short for **trans**mitter/**receiver**. A device that can both transmit and receive signals. On LANs (local area networks), a transceiver is the device that connects a computer to the network and that converts signals to and from parallel and serial form.

transceiver cable *n.* A cable that is used to connect a host adapter within a computer to a LAN (local area network). *See also* AUI cable, LAN.

transducer *n.* A device that converts one form of energy into another. Electronic transducers either convert electric energy to another form of energy or convert nonelectric to electric energy.

transfer[1] *n.* **1.** The movement of data from one location to another. **2.** The passing of program control from one portion of code to another.

transfer[2] *vb.* To move data from one place to another, especially within a single computer. *Compare* transmit.

transfer rate *n.* The rate at which a circuit or a communications channel transfers information from source to destination, as over a network or to and from a disk drive. Transfer rate is measured in units of information per unit of time—for example, bits per second or characters per second—and can be measured either as a raw rate, which is the maximum transfer speed, or as an average rate, which includes gaps between blocks of data as part of the transmission time.

transfer statement *n.* A statement in a programming language that transfers the flow of execution to another location in the program. *See also* branch instruction, CALL statement, GOTO statement, jump instruction.

transfer time *n.* The time elapsed between the start of a data transfer operation and its completion.

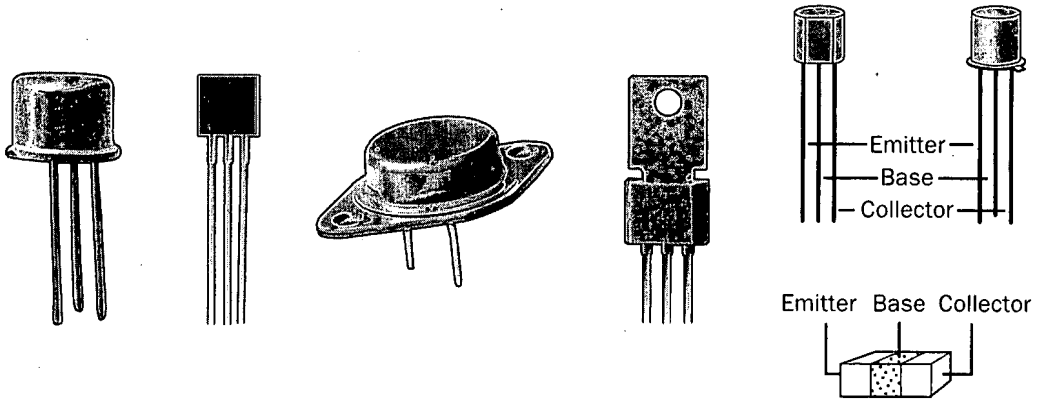
transform *vb.* **1.** To change the appearance or format of data without altering its content; that is, to encode information according to predefined rules. **2.** In mathematics and computer graphics, to alter the position, size, or nature of an object by moving it to another location (translation), making it larger or smaller (scaling), turning it (rotation), changing its description from one type of coordinate system to another, and so on.

transformer *n.* A device used to change the voltage of an alternating current signal or to change the impedance of an alternating current circuit.

transient *adj.* **1.** Fleeting, temporary, or unpredictable. **2.** Of or pertaining to the region of memory used for programs, such as applications, that are read from disk storage and that reside in memory temporarily until they are replaced by other programs. In this context, *transient* can also refer to the programs themselves. **3.** In electronics, of or pertaining to a short-lived, abnormal, and unpredictable increase in power supply, such as a voltage spike or surge. *Transient time* is the interval during which a change in current or voltage is building up or decaying.

transient suppressor *n.* A circuit designed to reduce or eliminate unwanted electrical signals or voltages.

transistor *n.* Short for **trans**fer re**sistor**. A solid-state circuit component, usually with three leads, in which a voltage or a current controls the flow of another current. The transistor can serve many functions, including those of amplifier, switch, and oscillator, and is a fundamental component of almost all modern electronics. See the illustration. *See also* base (definition 3), FET, NPN transistor, PNP transistor.



Transistor.